Section VII: Methodology

Total Traffic

The process of counting visitors to Alaska starts with traffic data. For AVSP V, exit traffic data was used. The following table shows each exit point, along with the type and source of the data. As in AVSP III and IV, the summer period consists of May 1 through September 30.

Exit Points and Data Sources
AVSP V - Summer 2006

Exit Point	Type of Data	Sources of Data
Domestic Air		
Anchorage	Enplaning passengers exiting the state	Anchorage International Airport; Alaska Airlines
Fairbanks	Enplaning passengers exiting the state	Fairbanks International Airport; Alaska Airlines
Juneau	Enplaning passengers exiting the state	Alaska Airlines
Ketchikan	Enplaning passengers exiting the state	Alaska Airlines
Sitka	Enplaning passengers exiting the state	Alaska Airlines
Other	Enplaning passengers exiting the state	Alaska Airlines
International Air		
Anchorage	Enplaning passengers exiting the state	Anchorage International Airport
Fairbanks	Enplaning passengers exiting the state	Fairbanks International Airport
Highway		
Fraser Border Station (Klondike Highway)	Occupants of private vehicles, motorcoaches, and commercial vehicles crossing the border	Yukon Department of Tourism and Culture
Pleasant Border Station (Haines Highway)	Occupants of private vehicles, motorcoaches, and commercial vehicles crossing the border	Yukon Department of Tourism and Culture
Beaver Creek Border Station (Alcan Highway)	Occupants of private vehicles, motorcoaches, and commercial vehicles crossing the border	Yukon Department of Tourism and Culture
Little Gold Border Station (Top of the World Highway)	Occupants of private vehicles, motorcoaches, and commercial vehicles crossing the border	Yukon Department of Tourism and Culture
Cruise Ship		
All southbound ships	Cruise ship passengers sailing southbound from Alaska ports to Canada/US ports	Cruise Line Agencies of Alaska
Ferry		
Bellingham	Ferry passengers disembarking at Bellingham	Alaska Marine Highway System
Prince Rupert	Ferry passengers disembarking at Prince Rupert	Alaska Marine Highway System

Because all commercial airlines besides Alaska Airlines only fly directly out-of-state, enplanement data from Anchorage and Fairbanks airports was used to determine exiting passengers aboard non-Alaska Airlines flights. Alaska Airlines, which operates flights within Alaska as well as out-of-state, provided an exact count of outbound passengers for each exit point.

Visitor/Resident Ratios

In order to estimate total visitor traffic, visitor/resident ratios were applied to the total traffic data. A visitor/resident ratio is the proportion of out-of-state visitors to Alaska residents for each exit mode. For most exit points, these ratios were collected in the form of "tallies" at the same time surveys were conducted. McDowell Group surveyors tallied a total of nearly 50,000 people as they were exiting Alaska. The following table shows the number of people tallied for each exit mode.

Visitor/Resident Tally Contacts, by Mode
AVSP V - Summer 2006

Exit Mode	Passengers Tallied
Domestic Air	37,220
International Air	8,010
Highway	3,499
Ferry	974
Cruise ship[1]	0
Total	**49,703**

[1] As in previous AVSP studies, 100 percent of cruise passengers were assumed to be out-of-state visitors.

All exiting passengers were assumed to be leaving Alaska for the last time (meaning, not re-entering on the same trip), with the exception of highway travelers. Highway traffic had to be adjusted for "last exit" visitors, because some of the traffic recorded in border crossing data re-enters Alaska and exits a second time – for example, many highway visitors exit Alaska on the Alcan highway, drive to Skagway, and exit the state a second time via the Alaska Marine Highway. This issue is explained further in the highway section, below.

Domestic and International Air

For each flight selected for surveying (see **Sampling Procedures**, below), a surveyor would position themselves directly outside the jetway before boarding.[1] As passengers boarded, the surveyor would ask, "Are you an Alaska resident?" and their response was recorded. Every passenger boarding each selected flight was tallied.

For the domestic air mode, ratios were compiled by location, by month, and applied to passenger enplanement data by location, by month.[2] International air ratios were compiled by location, by airline, and applied to passenger enplanement data by location and airline.

Highway

Highway tallies were collected during all survey sample periods. Shifts were four to five hours long. Survey/tally stations were set up adjacent to the border station on three highways: Alcan, Haines Highway, and Klondike

[1] The one exception to this collection method occurred in Sitka, where the infrequency of flights and small size of the boarding area allowed both surveys and tallies to be conducted outside of the secure area. Tallies were conducted as passengers waited in line to go through security.

[2] Because passengers flying directly out of state from "other" destinations (Petersburg, Wrangell, Yakutat, and Cordova) were not sampled in the survey, tallies were not conducted for these exit points. The visitor/resident ratio for these passengers was based on a compilation of Juneau, Ketchikan, and Sitka ratios.

Highway. Because of the time required to access the border station at the Top of the World Highway, the survey station was set up on the road before drivers boarded the ferry at Dawson City. There was no risk of compromising the sample, because all highway travelers crossing the border necessarily drive on to Dawson City.

In addition to the standard visitor/resident question, highway travelers were asked: "Are you re-entering Alaska on this trip?" The final ratio that was applied to traffic data reflected only "last exit" visitors, to avoid double-counting of those travelers who were re-entering Alaska and exiting by another mode or a different highway. Visitor/resident ratios were applied to exiting personal vehicle traffic by location.

There were two highway modes that, as in previous AVSP's, were not sampled: motorcoaches and commercial vehicles. Visitor/resident ratios and adjustment for last exit visitors for these modes were based on a number of sources, including interviews with tour operators, cruise passenger tour data, and interviews with border officials. Because visitor traffic among these two highway modes is so small, representing 0.2 percent of all visitors, they are combined with other highway traffic for the purposes of the visitor volume estimate.

Cruise Ship

No tallies were conducted for cruise passengers. As in previous AVSP studies, all cruise passengers were assumed to be out-of-state visitors.

Ferry

As in the other exit modes, surveyors would ask passengers aboard sampled ferry voyages exiting Alaska whether they were a resident or visitor. Nearly 1,000 tallies were conducted of ferry passengers during the summer sample period. In addition, the project team was able to procure actual passenger origin by month and destination from the Alaska Marine Highway System, compiled from reservation data. (It was not known until after the summer sample period whether this data would be accessible.)

Survey Population

The AVSP Summer 2006 survey was conducted with out-of-state visitors who were exiting Alaska between May 1 and September 30, 2006. Seasonal residents, such as cannery and oil field workers, were screened out of the survey. The following table shows how respondents were targeted, by exit mode.

Target Survey Population, by Mode
AVSP V - Summer 2006

Exit Mode	Target Survey Population
Domestic Air	Boarding flight bound for non-Alaska, domestic destination
International Air	Boarding flight bound for international destination
Highway	Recently crossed Alaska/Yukon border; not intending to re-enter Alaska
Cruise ship	Boarding cruise ship at its final Alaska port-of-call
Ferry	Disembarking in Prince Rupert or Bellingham

Survey Design

Unlike previous AVSP studies that involved three separate survey instruments, AVSP V utilized one combined instrument. The survey was designed by the McDowell Group study team with input from the Alaska Department of Commerce, Community and Economic Development and the Alaska Travel Industry Association. Questions were formulated with several factors in mind: consistency with previous AVSP survey instruments; streamlining and improving questions where possible; ease of use in intercept *and* online formats; utilizing knowledge gained in other visitor survey projects; and new information needs on the part of the state and the visitor industry.

Survey Staff

The AVSP Summer 2006 survey staff included 30 surveyors based in the following locations: Anchorage, Fairbanks, Juneau, Ketchikan, Sitka, Whitehorse, Dawson City, and the Yukon border stations on the Haines, Klondike and Alcan highways. Surveyors underwent rigorous training in order to ensure that respondents were dealt with in a friendly and courteous manner, and that all surveys were administered in the same way to minimize bias. The Summer 2006 staff included surveyors who spoke German, Japanese, Cantonese, Spanish, Portuguese, and American Sign Language. Surveyors in airports, on cruise ship docks, and aboard ferries wore name badges and uniforms. Highway surveyors wore hard hats, boots, and reflective vests as required by the Yukon Department of Highway and Public Works.

Survey Locations

The following table shows where surveys were conducted. These exit locations account for virtually 100 percent of visitors exiting Alaska. The limited number of visitors using other modes and locations does not warrant including them in the sample.[3] In every survey location, online invitation cards were also distributed.

Survey Locations
AVSP V - Summer 2006

Exit Mode	Survey Location
Domestic Air	
	Anchorage International Airport
	Fairbanks International Airport
	Juneau International Airport
	Ketchikan International Airport
	Sitka Airport
International Air	
	Anchorage International Airport
	Fairbanks International Airport
Highway	
	Fraser Border Station (Klondike Highway)
	Pleasant Border Station (Haines Highway)
	Beaver Creek Border Station (Alcan Highway)
	Dawson City (Top of the World Highway)
Cruise Ship	
	Ketchikan cruise ship docks
	Juneau cruise ship docks
	Skagway cruise ship docks
	Sitka cruise ship lightering docks
	Hoonah cruise ship lightering docks
Ferry	
	Aboard Alaska Marine Highway ferries sailing to Bellingham and Prince Rupert

[3] Un-sampled exit modes include: commercial vehicles, private planes, private boats, pedestrians, and airplane passengers flying directly out-of-state from Cordova, Yakutat, Petersburg, and Wrangell.

Sample Sizes

The AVSP Summer 2006 survey program included 2,703 intercept surveys (in-person interviews) and 2,956 surveys completed online, for a total of 5,659 surveys. The total sample exceeded the target sample of 5,000 by a significant margin, largely due to the higher-than-expected online response rate. The following table shows the number of completed surveys, by exit mode.

Sample Sizes, by Mode
AVSP V – Summer 2006

Exit Mode	Intercept	Online	Total
Domestic Air	1,528	1,917	3,445
International Air	274	299	573
Highway	246	85	331
Cruise ship	503	475	978
Ferry	152	180	332
Total	**2,703**	**2,956**	**5,659**

Sampling Procedure

The sampling process starts with creating a target number of intercept surveys, by month, for each mode and exit point. These targets were largely based on estimated traffic volume (for which the study team had extensive records from the 2005 *Alaska Travelers Survey*). The sample targets were adjusted to ensure appropriate sample sizes. For example, visitors exiting by ferry represent only 0.7 percent of all visitors. If they were represented proportionally in the sample, the target would be too small for analysis (18 out of 2,500 surveys). The ferry target became 150 surveys. Similarly, the international air sample was adjusted upwards because there was particular interest in this market on the part of the State and the visitor industry. These visitors represent 1.0 percent of total exiting visitors, but had a target of 200 surveys.

After sample targets were determined for each mode and exit point, monthly targets were determined based on traffic volume, and daily targets based on expected visitor frequency and surveyor capacity. Survey days were selected by month, based on a random start.

Following are more specific sampling procedures for each exit mode.

Domestic and International Air

The air samples were created using flight schedules for all airlines carrying passengers out of the state. For each sample day, flights were selected based on a random start. For each flight that was selected, surveyors had a target number of surveys to complete among boarding passengers. Surveyors would approach randomly selected passengers in the boarding area and complete the required number of surveys. Each surveyor was badged, which allowed them into the secure area of the airport. Official airport security badges, coupled with the heightened compliance with travel security, contributed to the high response rates among domestic air (92 percent) and international air passengers (82 percent).

Highway

The highway sample was based on monthly traffic levels at each of the four border stations. Survey stations were set up adjacent to the border station on three highways (Alcan, Haines Highway, and Klondike Highway), and near the Dawson City ferry dock on the Top of the World Highway. Surveyors would work in four to five-hour shifts on each sample day. When motorists had completed their Customs interview (or before boarding the ferry at Dawson City), they were directed by signs to pull over to the side of the road, where surveyors would conduct their tally of all motorists, and would randomly select respondents for the intercept survey. Highway travelers who were re-entering Alaska on the same trip were screened out of the survey.

Surveyors were certified in flagging and stopping vehicles by the Yukon Department of Highways and Public Works. They were also able to use official, government-issued signs and cones. The official appearance of the survey stations and surveyors themselves, as well as their proximity to border stations, likely played a role in the high response rate among highway travelers (83.6 percent).

Cruise Ship

The cruise ship sample was selected based on the expected volume of passengers at each "last port of call" in Alaska – that is, every port that represented the final stop before the ship exited Alaska, and continued on to non-Alaska ports. Cruise Line Agencies of Alaska provided the 2006 cruise ship schedule, including each ship's route and capacity. Although Ketchikan represented the bulk of exiting passengers, the 2006 cruise ship schedule included several other last-call ports: Juneau, Skagway, Sitka, and Hoonah (Icy Strait Point). The appropriate number of surveys was conducted in each location to reflect actual exiting volume. Survey targets also reflected passenger volume by cruise line – for example, if 30 percent of all exiting cruise passengers were expected to be sailing with Princess Cruises, 30 percent of the targeted ships were Princess ships.

Surveyors would station themselves outside the targeted ship several hours prior to boarding. They approached randomly selected passengers to complete surveys before they boarded their ship. Where necessary, surveyors were given special permission by private dock owners to interview passengers in the embarkation areas.

Ferry

Ferry passengers were surveyed onboard Alaska Marine Highway vessels bound for Bellingham and Prince Rupert. Sampled vessels were selected randomly by month among all southbound voyages. Surveyors would approach randomly selected passengers during sample periods in public areas of the ferry. Because surveyors sailed along with passengers, there was ample time to survey passengers who purchased staterooms as well as those who did not.

Online Component

The AVSP V survey methodology included an online sample in addition to the intercept sample. The online sample was targeted by distributing "invitation cards" to visitors during intercept sample periods (see image, below). The color-printed postcard contained a message from the Governor inviting visitors to share information about their trip over the Internet (see below). Recipients were directed to a web address, and each postcard had a unique password. Respondents would then go online and self-administer the survey.

For every intercept survey that was completed, surveyors distributed a target number of invitation cards. Cards were distributed to visitors departing on the same flights, ferry voyages, cruise sailings, etc. as intercept respondents.

The online survey was designed to mirror the intercept survey to the greatest extent possible. Questions were asked in the same order, with nearly identical wording to the intercept survey. More explicit directions were necessary for some questions to minimize confusion. If respondents had questions or difficulties filling out the survey, there was a link on the bottom of each screen to contact the Help Desk.

The online method allowed for certain efficiencies not possible in the intercept format. These included automated skip patterns and auto-sum functions in the expenditure section. Destinations visited were automatically linked to a personalized menu as respondents progressed to the activities and expenditures sections. In addition, the self-administered format eliminated the need for data entry.

Response Rates

Response rates show the percentage of people who completed a survey out of the total number of people targeted.

In intercept surveys, the response rate is the number of total surveys, divided by the number of qualified, targeted respondents approached by surveyors. For example, for the Domestic Air mode, there were 1,630 qualified respondents – that is, out-of-state residents who were exiting Alaska. Of this number, 130 declined to be interviewed. The response rate for Domestic Air is 1,500 divided by 1,630, or 92.0 percent.

For the online survey, the response rate is the number of people who completed the online survey, out of the total number of people who received invitation cards. (Only out-of-state visitors exiting Alaska were given cards.) For example, there were 11,011 cards distributed to visitors exiting the state via Domestic Air. Of these visitors, 2,111 completed the online survey. The response rate for Domestic Air online respondents is 2,111 divided by 11,011, or 19.2 percent.

Response Rates, by Mode
AVSP V - Summer 2006

Exit Mode	Intercept	Online
Domestic Air	92.0%	19.2%
International Air	81.5%	20.3%
Highway	83.6%	13.5%
Cruise ship	72.3%	13.7%
Ferry	89.0%	13.1%
Total	**85.6%**	**17.5%**

The overall response rate for the intercept sample was 85.6 percent. Rates differed somewhat by mode, as expected. Domestic air respondents generally show the highest intercept response rates because they often have plenty of time (and little to do) while they are waiting for their flight. Ferry passengers are also almost always willing to be interviewed, as they are onboard for significant periods of time. Cruise passengers show slightly lower response rates – they are approached as they return to their ship, occasionally in inclement weather, and can be anxious to embark.

Online response rates also correspond to expectations for each exit mode. Ferry, highway, and cruise ship passengers are often several days from returning home when they receive the invitation card. This makes them more likely to lose the card or forget about it when compared to air passengers, who are usually returning home that same day.

Although response rates differ by mode and by survey method, the data is not adversely affected. As explained in **Data Weighting**, above, all data is weighted according to traffic volumes by mode and location.

Given the length and complexity of the survey instrument, response rates exceeded expectations for the intercept sample. Nearly nine out of ten visitors approached agreed to complete a 10 to 20 minute survey, sometimes in rainy, windy, or buggy weather, with a pin as an incentive. Several factors helped: well-trained,

friendly surveyors; the eagerness of respondents to share information about their recently completed trip; and, in the case of ferry and air respondents, the lack of other available activities.

Response rates far exceeded expectations for the online sample. Based on a test conducted in the summer of 2005, the study team projected a response rate of 12 percent for the Domestic Air mode. The actual response rate for Domestic Air was 19.2 percent, and 17.5 percent for all modes combined. The higher response rate likely resulted from the high quality of the invitation cards and the generous incentives offered.

Incentives

Incentives are commonly used in surveys to maximize response rates. For AVSP V, incentives were used in both the intercept and online surveys. Intercept respondents were given an Alaska keepsake pin. Online respondents were entered into a monthly drawing to win a Denali Park Resorts package. All summer respondents were also entered into a drawing for a Princess cruise to Alaska, Mexico, or the Caribbean.

Margins of Error

The following table shows the maximum margin of error for the intercept and combined samples. The maximum margin is ±1.4 percent for the overall sample and ±1.9 percent for the intercept sample. The combined sample is used for most data in this report, with a few categories based to intercept respondents only. Sample sizes and margins of error for specific subgroups are presented in the introduction to each section and/or chapter where those subgroups are profiled.

Visitor Survey Margin of Error
AVSP V – Summer 2006

Survey Method	Sample Size	Maximum Margin of Error
Intercept	2,703	±1.9%
Online	2,956	n/a
Total	**5,659**	**1.4**

Note: The data presented in this report is based to either intercept data or total data. Data based only to online respondents is not reported.

While the margin factors in the table above (and those offered throughout this report) give general guidelines for the margin of error, most data in this report are more accurate than the maximum factors suggest. The margin is based not only on the number of respondents in the base of each question, but on the statistic itself. The expression "maximum margin of error" applies only if the attribute being sampled is distributed 50-50 among the population, such as gender. For gender, the maximum margin of error for the total sample is ±1.4 percent.

However, the potential for error decreases as soon as the survey result moves toward either end of the bell curve. If a survey response is around 80 percent for the total sample of 5,659, the maximum error decreases to ±1.1 percent. This margin would apply, for example, to the survey result for trip purpose – 82 percent of all visitors said they were traveling for vacation/pleasure. That same margin would apply to responses around 20

percent. At the 90 and 10 percent level, the maximum margin for the total sample decreases even further, to ±0.77 percent.

Data Processing

Data Weighting

Survey data is often "weighted" to properly reflect known characteristics of a population. The primary weighting in AVSP is by exit mode. For example, AVSP V included 235 surveys of visitors who exited the state by ferry, or 4.0 percent of all surveys. However, this market represents only 0.7 percent of all visitors. In order for these visitors to be properly represented in the overall visitor market, their surveys are "weighted down." Similarly, visitors exiting by cruise ship represented 17.4 percent of all surveys, but 46.5 percent of all exiting visitors. Their data is "weighted up." All AVSP data was weighted by exit mode to reflect actual traffic volumes.

Online data was weighted by one additional factor: the geographic distribution of visitor origin. Online respondents from international countries and from certain geographical regions of the US were slightly less likely to respond to the survey. Because the intercept method ensured accurate distribution by origin, online data was weighted to reflect origin distribution in the intercept sample.

Combining Data Sets

As explained earlier in this chapter, the visitor survey included two different methodologies: online and intercept. The online survey targeted the same visitor population as the intercept survey – invitation cards were distributed to visitors on the same flights, ferry vessels, cruise ships, and during the same highway periods as intercept respondents. However, because the online survey (naturally) received lower response rates, and because the survey was in a different format, several issues had to be addressed before combining the two data sets.

This first issue is bias. Self-selection bias occurs when the characteristics of respondents who choose to answer a survey differ from those of the overall target population. Even though the response rates for the online survey far exceeded expectations at 18 percent, there was the possibility that the population that chose to respond to the survey differed from the population in the intercept survey. To address this issue, the study team compared a wide range of demographic variables between the two samples, including gender, origin, age, income, and education. Only origin presented a potential bias; this was addressed with weighting, as described above.

The results to other survey questions were carefully compared to detect any sign of additional bias among online respondents. The only other apparent bias was in trip planning. Online respondents were more likely to use nearly all trip planning sources, particularly the Internet. For questions regarding trip planning sources, only intercept data is presented in the report.

The second issue is the difference in survey formats. Although the online survey was designed to mirror the intercept survey, results showed that some questions worked better in a personal interview format than online. In an intercept survey, the interviewer is able to explain and clarify questions when necessary. Following is a

list of survey questions where the reported data reverts to the intercept sample only due to misinterpretation in the online survey.

Party size. Respondents were asked how many people were traveling in their party, sharing expenses. Interviewers were able to clarify this question if a respondent (mistakenly) answered with the number of people in their tour group, for example. Online respondents were not given this opportunity to clarify their response. As a result, the average party size among online respondents was higher than among intercept respondents.

Activity participation. Certain activities generated much higher participation rates in the online survey when compared to the intercept survey. These activities tended to be categories that online respondents appeared to interpret more broadly than in the intercept survey, including historical/cultural attractions, Native cultural tours/activities, and shows/Alaska entertainment. Activities that had more straightforward definitions (shopping, birdwatching, White Pass and Yukon Railroad, visiting friends and relatives, and fishing, among others) yielded very similar results for the two samples. It appears that the guidance of the surveyor was essential for respondents to understand some activity categories, and not over-report by counting one activity in two categories, for example.

Transportation between communities. Although this question specifically asked what modes were used to travel *between communities*, it appears that some online respondents misinterpreted this question to refer to modes of transportation used at any point on their trip. For example, online cruise respondents were much more likely to say they used motorcoach, train, and air to travel between communities when compared to the intercept sample. The online respondents were often referring to shore excursions and their travel to get in or out of the state. This was a difficult question for online respondents to understand without the aid of a surveyor.

Expenditures. Questions on expenditures tend to be difficult for visitors to answer, whether intercept or online. Respondents have to rely on their memory, sometimes on purchases made days or weeks beforehand. The level of detail requested on this survey was particularly challenging: visitors were asked for their purchases in each community, in six different categories, in addition to overall spending in the state, spending on packages, and more. The differences in expenditure results between the intercept and online samples indicated that the online respondents had difficulty with the complexity of this part of the survey. For example, some questions referred to spending by party, others asked for per person prices. The overall spending question asked the respondent to discount travel to and from Alaska. In the field, surveyors could help clarify these questions.

Throughout this report, the data in the above categories is accompanied by a footnote and the statement "based to intercept respondents only."

Despite the fact that some online results were not used in this report, it is important to recognize the value of introducing the online survey to the AVSP process. It increased the overall sample size for most questions, from 2,703 to 5,659. The large sample size was critical to providing useful data at the subgroup level, including communities, region of origin, and other subgroups. In addition, the intercept-only samples remain large enough in most cases to ensure significant confidence in the data.